Application No.: 10/586,941

Office Action Dated: October 16, 2009

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Original) A solar panel having a panel front and a panel back comprising:

an array of solar cells, each of said solar cells having a front and a back, wherein

at least the front is capable of converting at least a portion of solar light incident

thereon into electrical energy, there being spacings between at least some of the

solar cells; and

- an element comprising a visually distinguishable feature at least one position

selected from the group consisting of: between the panel back and the panel front,

on the panel front, on the panel back, at the panel front, and at the panel back,

such that the visually distinguishable feature is at least partially distinguishable on viewing

the panel front, and wherein the nature of the visually distinguishable feature and the location

of the element relative to the solar cells do not completely prevent solar light incident on the

panel front from being incident on at least a portion of the array.

2. (Original) The solar panel of claim 1 wherein the nature of the visually

distinguishable feature and the location of the element relative to the solar cells are such that

the amount of solar light incident on the array relative to the amount of solar light incident on

the panel front is greater than about 50%.

3. (Original) The solar panel of claim 1 wherein the element is removable from the

solar panel.

4. (Original) The solar panel of claim 1 in which there is an encapsulant between the

solar cells.

5. (Original) The solar panel of claim 4 wherein the encapsulant is at least partially

transparent.

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6. (Original) The solar panel of claim 1 wherein the array is disposed on a transparent

support panel.

7. (Original) The solar panel of claim 1 wherein the array is disposed between

transparent support panels.

8. (Original) The solar panel of claim 1 wherein the backs of at least some of the solar

cells are capable of converting at least a portion of solar light incident thereon into electrical

energy, and there is a reflector located between the array and the panel back, said reflector

being capable of reflecting at least part of the solar light incident on the solar panel towards

the backs of at least some of the solar cells.

9. (Original) The solar panel of claim 1 wherein the backs of at least some of the solar

cells are capable of converting at least a portion of solar light incident thereon into electrical

energy and the panel back comprises a reflector, said reflector being capable of reflecting at

least part of the solar light incident on the solar panel towards the backs of at least some of

the solar cells.

10. (Previously presented) The solar panel of claim 9 wherein the reflector is selected

from the group consisting of a Lambertian reflector, a diffuse reflector, a light scattering

reflector and a reflector that approximates one of these.

11. (Original) The solar panel of claim 1 wherein the visually distinguishable feature is

at least partially distinguishable through the array on viewing a component selected from the

group consisting of the panel front or the panel back.

12. (Original) The solar panel of claim 1 wherein the element is located between the

solar cells of the array.

13. (Original) The solar panel of claim 12 wherein the element comprises an

encapsulant.

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14. (Original) The solar panel of claim 1 wherein the element is located between the

array and the panel front.

15. (Original) The solar panel of claim 1 wherein the panel front comprises the

element.

16. (Original) The solar panel of claim 1 wherein the element comprises at least one

activatable element, the appearance of which is capable of being changed by application of a

stimulus selected from the group consisting of electrical, thermal, optical or magnetic stimuli.

17. (Original) The solar panel of claim 16 wherein the stimulus is supplied from a

source selected from the group consisting of a source external to the solar panel and the array

of solar cells.

18. (Original) The solar panel of claim 1 wherein the visually distinguishable feature is

capable of being changed electronically.

19. (Original) The solar panel of claim 1 additionally comprising means to change the

visually distinguishable feature, said means being selected from the group consisting of

means to change the visually distinguishable feature physically, mechanically, electrically,

thermally, optically and magnetically.

20. (Currently amended) A solar panel comprising an array of solar cells, each of said

solar cells having a front and a back, wherein at least the front is capable of converting at

least a portion of solar light incident thereon into electrical energy, and wherein there are

spacings between at least some of the solar cells whereby the arrangement of the solar cells in

the array embodies a visually distinguishable feature, said feature being selected from the

group consisting of a design, a decoration, a picture, a drawing, a sketch, an etching, a

marking, a layout, a sketch, a brand, an advertisement, a notice, a sign, a name, a seal, an

insignia, a portrait, a scene, a cartoon, a caricature, an icon, a signature, a photograph, an

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image, a logo, at least one letter, at least one number, at least one word, a calendar, a label, a trademark, a plan, a map and at least one marking.

21. (Previously presented) The solar panel of claim 1 wherein each of said solar cells comprises:

a semiconductor strip comprising a p-type dopant or an n-type dopant and having a front, a back, a first side surface and a second side surface, wherein, in the event that the semiconductor strip comprises a p-type dopant, a first diffusion layer of an n-type conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion of the front and at least a portion of the first side surface and, in the event that the semiconductor strip comprises an n-type dopant, a first diffusion layer of a p-type conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion of the front surface and at least a portion of the first side surface;

a first metal contact in electrical contact with the first diffusion layer of the first side surface; and

a second metal contact in electrical contact with the second side surface but being electrically isolated from the first diffusion layer.

- 22. (Original) A combination for conversion of solar energy comprising:
- an array of solar cells, each of said solar cells having a front and a back, wherein at least the front is capable of converting at least a portion of solar light incident thereon into electrical energy, there being spacings between at least some of the solar cells, and said array having an array front and an array back, and
- an element comprising a visually distinguishable feature at least one position selected from the group consisting of in front of the array front, at the array back or behind the array back,

such that the visually distinguishable feature is at least partially distinguishable on viewing the combination, and wherein the nature of the visually distinguishable feature and the location of the element relative to the solar cells do not completely prevent solar light incident on the combination from being incident on at least a portion of the array.

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23. (Original) The combination of claim 22 wherein each of said solar cells

comprises:

a semiconductor strip comprising a p-type dopant or an n-type dopant and having a front, a back, a first side surface and a second side surface, wherein, in the event that the semiconductor strip comprises a p-type dopant, a first diffusion layer of an n-type conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion of the front and at least a portion of the first side surface and, in the event that the

semiconductor strip comprises an n-type dopant, a first diffusion layer of a p-type

conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion

of the front surface and at least a portion of the first side surface;

a first metal contact in electrical contact with the first diffusion layer of the first

side surface; and

a second metal contact in electrical contact with the second side surface but being

electrically isolated from the first diffusion layer.

24. (Original) A process for making a solar panel having a panel front and a panel

back, said process comprising locating:

an array of solar cells, each of said solar cells having a front and a back, wherein at

least the front is capable of converting at least a portion of solar light incident

thereon into electrical energy, there being spacings between at least some of the

solar cells, and

an element comprising a visually distinguishable feature,

such that the element is located at least one position selected from the group consisting of

between the panel back and the panel front, on the panel front, on the panel back, at the panel

front, and at the panel back, and such that the visually distinguishable feature is at least

partially distinguishable on viewing the panel front, and wherein the nature of the visually

distinguishable feature and the location of the visually distinguishable feature relative to the

solar cells do not completely prevent solar light incident on the panel front from being

incident on at least a portion of the array.

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25. (Currently amended) A process for making a solar panel comprising the step of arranging a plurality of solar cells in an array, each of said solar cells having a front and a back, wherein at least the front is capable of converting at least a portion of solar light incident thereon into electrical energy, and wherein there are spacings between at least some of the solar cells whereby the arrangement of the solar cells in the array embodies a visually distinguishable feature, said feature being selected from the group consisting of a design, a colour, a decoration, a picture, a drawing, a sketch, an etching, a marking, a layout, a sketch, a brand, an advertisement, a notice, a sign, a name, a seal, an insignia, a portrait, a scene, a cartoon, a caricature, an icon, a signature, a photograph, an image, a logo, at least one letter, at least one number, at least one word, a calendar, a label, a trademark, a plan, a map and at least one marking.

- 26. (Original) The process of claim 25 additionally comprising the step of locating the solar panel and a reflector such that the reflector is capable of reflecting at least part of the solar light incident on the solar panel towards at least some of the solar cells of the array.
- 27. (Previously presented) The process of claim 24 wherein each of said solar cells comprises:

a semiconductor strip comprising a p-type dopant or an n-type dopant and having a front, a back, a first side surface and a second side surface, wherein, in the event that the semiconductor strip comprises a p-type dopant, a first diffusion layer of an n-type conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion of the front and at least a portion of the first side surface and, in the event that the semiconductor strip comprises an n-type dopant, a first diffusion layer of a p-type conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion of the front surface and at least a portion of the first side surface;

- a first metal contact in electrical contact with the first diffusion layer of the first side surface; and
- a second metal contact in electrical contact with the second side surface but being electrically isolated from the first diffusion layer.

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28. (Previously presented) A solar panel when made by the process of claim 24.

29. (Original) A process for making a combination for conversion of solar energy,

said process comprising locating:

- an array of solar cells, each of said solar cells having a front and a back, wherein at

least the front is capable of converting at least a portion of solar light incident

thereon into electrical energy, there being spacings between at least some of the

solar cells, and said array having an array front and an array back, and

- an element comprising a visually distinguishable feature,

such that the element is located at least one position selected from the group consisting of in

front of the array front, at the array front, at the array back or behind the array back, and such

that the visually distinguishable feature is at least partially distinguishable on viewing the

panel front, wherein the nature of the visually distinguishable feature and the location of the

visually distinguishable feature relative to the solar cells do not completely prevent solar light

incident on the combination from being incident on at least a portion of the array.

30. (Original) The process of claim 29 wherein each of said solar cells comprises:

a semiconductor strip comprising a p-type dopant or an n-type dopant and having a

front, a back, a first side surface and a second side surface, wherein, in the event that the

semiconductor strip comprises a p-type dopant, a first diffusion layer of an n-type

conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion

of the front and at least a portion of the first side surface and, in the event that the

semiconductor strip comprises an n-type dopant, a first diffusion layer of a p-type

conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion

of the front surface and at least a portion of the first side surface;

a first metal contact in electrical contact with the first diffusion layer of the first

side surface; and

a second metal contact in electrical contact with the second side surface but being

electrically isolated from the first diffusion layer.

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31. (Previously presented) A combination for conversion of solar energy, when

made by the process of claim 29.

32. (Previously presented) A solar cell having a front and a back, wherein at least

the front is capable of converting at least a portion of solar light incident thereon into

electrical energy, when used in a solar panel according to claim 1.

33. (Previously presented) An array of solar cells, each of which has a front and a

back, wherein at least the front is capable of converting at least a portion of solar light

incident thereon into electrical energy, when used in a solar panel according to claim 1.

34. (Previously presented) An array of solar cells when used in a solar panel

according to claim 1, wherein each of said solar cells comprises:

a semiconductor strip comprising a p-type dopant or an n-type dopant and having a

front, a back, a first side surface and a second side surface, wherein, in the event that the

semiconductor strip comprises a p-type dopant, a first diffusion layer of an n-type

conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion

of the front and at least a portion of the first side surface and, in the event that the

semiconductor strip comprises an n-type dopant, a first diffusion layer of a p-type

conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion

of the front surface and at least a portion of the first side surface;

a first metal contact in electrical contact with the first diffusion layer of the first

side surface; and

a second metal contact in electrical contact with the second side surface but being

electrically isolated from the first diffusion layer.

35. (Previously presented) Use of a solar panel according to claim 1 for converting

light into electrical energy.

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36. (Previously presented) A method for converting light into electrical energy comprising exposing a solar panel according to claim 1 to the light such that at least a portion

of the light is incident on the panel front.

37. (Previously presented) A solar panel according to claim 1 when used for

converting light into electrical energy.

38. (Previously presented) The solar panel of claim 8 wherein the reflector is

selected from the group consisting of a Lambertian reflector, a diffuse reflector, a light

scattering reflector and a reflector that approximates one of these.

39. (Previously presented) The solar panel of claim 20 wherein each of said solar

cells comprises:

a semiconductor strip comprising a p-type dopant or an n-type dopant and having a

front, a back, a first side surface and a second side surface, wherein, in the event that the

semiconductor strip comprises a p-type dopant, a first diffusion layer of an n-type

conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion

of the front and at least a portion of the first side surface and, in the event that the

semiconductor strip comprises an n-type dopant, a first diffusion layer of a p-type

conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion

of the front surface and at least a portion of the first side surface;

a first metal contact in electrical contact with the first diffusion layer of the first

side surface; and

a second metal contact in electrical contact with the second side surface but being

electrically isolated from the first diffusion layer.

40. (Previously presented) The process of claim 25 wherein each of said solar

cells comprises:

a semiconductor strip comprising a p-type dopant or an n-type dopant and having a

front, a back, a first side surface and a second side surface, wherein, in the event that the

semiconductor strip comprises a p-type dopant, a first diffusion layer of an n-type

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conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion of the front and at least a portion of the first side surface and, in the event that the semiconductor strip comprises an n-type dopant, a first diffusion layer of a p-type conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion of the front surface and at least a portion of the first side surface;

a first metal contact in electrical contact with the first diffusion layer of the first side surface; and

a second metal contact in electrical contact with the second side surface but being electrically isolated from the first diffusion layer.

- 41. (Previously presented) A solar panel when made by the process of claim 25.
- 42. (Previously presented) A solar cell having a front and a back, wherein at least the front is capable of converting at least a portion of solar light incident thereon into electrical energy, when used in a solar panel according to claim 20.
- 43. (Previously presented) An array of solar cells, each of which has a front and a back, wherein at least the front is capable of converting at least a portion of solar light incident thereon into electrical energy, when used in a solar panel according to claim 20.
- 44. (Previously presented) An array of solar cells when used in a solar panel according to claim 20, wherein each of said solar cells comprises:

a semiconductor strip comprising a p-type dopant or an n-type dopant and having a front, a back, a first side surface and a second side surface, wherein, in the event that the semiconductor strip comprises a p-type dopant, a first diffusion layer of an n-type conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion of the front and at least a portion of the first side surface and, in the event that the semiconductor strip comprises an n-type dopant, a first diffusion layer of a p-type conductivity has been introduced by diffusion, using a suitable dopant, into at least a portion of the front surface and at least a portion of the first side surface;

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a first metal contact in electrical contact with the first diffusion layer of the first

side surface; and

a second metal contact in electrical contact with the second side surface but being

electrically isolated from the first diffusion layer.

45. (Previously presented) Use of a solar panel according to claim 20 for

converting light into electrical energy.

46. (Previously presented) A method for converting light into electrical energy

comprising exposing a solar panel according to claim 20 to the light such that at least a

portion of the light is incident on the panel front.

47. (Previously presented) A solar panel according to claim 20 when used for

converting light into electrical energy.